

SAFETY DATA SHEET

OTEC EF 11-0

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Trade name: OTEC EF 11-0

Product no.: OT21050

1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses of the substance or mixture: Electrolyte
Restricted to professional users.

Use descriptors (REACH):

Sectors of use	Description
SU 0	Other
Product category	Description
PC 14	Metal surface treatment products, including galvanic and electroplating products
Process category	Description
PROC 0	Other
Environmental release category	Description
ERC 7	Industrial use of substances in closed systems

Uses advised against : None known.

1.3. Details of the supplier of the safety data sheet

Company and address: **Aktiv Guld A/S**
Vallensbækvej 46
2625 Vallensbæk
Denmark
+45 43 66 20 00
<https://www.aktivguld.com/>

E-mail: ag@aktivguld.com

Revision: 03/09/2025

SDS Version: 3.0

Date of previous version: 08/08/2025 (3.0)

1.4. Emergency telephone number

Contact the poison hotline: +45 82 12 12 12 (24 hour service)
See section 4 "First aid measures".

SECTION 2: HAZARDS IDENTIFICATION

Classified according to Regulation (EC) No. 1272/2008 (CLP).

2.1. Classification of the substance or mixture

Acute Tox. 4; H302, Harmful if swallowed.

Skin Irrit. 2; H315, Causes skin irritation.

Eye Dam. 1; H318, Causes serious eye damage.

STOT RE 2; H373, May cause damage to organs through prolonged or repeated exposure.

2.2. Label elements

Hazard pictogram(s):



Signal word:

Danger

Hazard statement(s):

Harmful if swallowed. (H302)

Causes skin irritation. (H315)

Causes serious eye damage. (H318)

May cause damage to organs through prolonged or repeated exposure. (H373)

Precautionary statement(s):

General:

Not applicable.

Prevention:

Do not breathe vapour/mist. (P260)

Wash hands and exposed skin thoroughly after handling. (P264)

Wear face protection/protective gloves/protective clothing. (P280)

Response:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338)

Immediately call a POISON CENTER/doctor. (P310)

Storage:

Not applicable.

Disposal:

Dispose of contents/container in accordance with local regulation. (P501)

Hazardous substances:

ethanediol;ethylene glycol
methanesulphonic acid

▼ *Additional labelling:*

2.3. Other hazards

Additional warnings:

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2023/707.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Not applicable. This product is a mixture.

3.2. Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
ethanediol;ethylene glycol	CAS No.: 107-21-1 EC No.: 203-473-3 REACH: 01-2119456816-28-XXXX Index No.: 603-027-00-1	>50-≤100%	Acute Tox. 4, H302 STOT RE 2, H373	[1]
methanesulphonic acid	CAS No.: 75-75-2 EC No.: 200-898-6 REACH: 01-2119491166-34-XXXX Index No.: 607-145-00-4	≥3-<5%	Met. Corr. 1, H290 Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335	
citric acid	CAS No.: 77-92-9 EC No.: 201-069-1 REACH: 01-2119457026-42-XXXX Index No.: 607-750-00-3	>1-≤2,5%	Eye Irrit. 2, H319 STOT SE 3, H335	

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

Other information

[1] European occupational exposure limit.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures



According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

<i>General information:</i>	In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.
<i>Inhalation:</i>	Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.
<i>Skin contact:</i>	Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners. If skin irritation occurs: Get medical advice/attention.
<i>Eye contact:</i>	If in eyes: Flush eyes with plenty of water or salt water (20-30 °C) for at least 30 minutes and continue until irritation stops. Remove contact lenses. Make sure you flush under the upper and lower eyelids. Seek medical assistance immediately and continue flushing during transport.
<i>Ingestion:</i>	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
<i>Burns:</i>	Not applicable.

4.2. Most important symptoms and effects, both acute and delayed

The product contains substances that cause serious eye damage. Contact with these substances can cause irreversible effects on the eye / serious eye damage.
Neurotoxic effects: This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

4.3. Indication of any immediate medical attention and special treatment needed

IF exposed or concerned:
Get immediate medical advice/attention.

Information to medics

Bring this safety data sheet or the label from this product.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.
Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

5.2. Special hazards arising from the substance or mixture

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Sulphur oxides

Carbon oxides (CO / CO₂)

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact the chemical emergency services on 72 85 20 00 (24 h service) in order to obtain further advice.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Avoid direct contact with spilled substances.

Ensure adequate ventilation, especially in confined areas.

Contaminated areas may be slippery.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.

Keep unauthorized persons away from the spill

6.3. Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Avoid direct contact with the product.

Avoid contact during pregnancy and while nursing.

Smoking, drinking and consumption of food is not allowed in the work area.

See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2. Conditions for safe storage, including any incompatibilities

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage material: Keep only in original packaging.

Storage conditions: Store securely, out of the reach of children and not together with food, feed, medicines etc. Should be stored in tightly closed original packaging.
Do not store below 0 C° Celcius.
Dry, cool and well ventilated

Incompatible materials: Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

ethanediol;ethylene glycol

Long term exposure limit (8 hours) (mg/m³): 26 / 10 (forstøvet)

Long term exposure limit (8 hours) (ppm): 10

Short term exposure limit (15 minutes) (mg/m³): 104 / 20 (forstøvet)

Short term exposure limit (15 minutes) (ppm): 40

Annotations:

E = Substance has an EC limit.

H = The substance can be absorbed through the skin.

Statutory order 1619 on exposure limits for substances and mixtures (19/12/2024)

DNEL

ethanediol;ethylene glycol

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects - General population	Dermal	53 mg/kg bw/day
Long term – Systemic effects - Workers	Dermal	106 mg/kg bw/day
Long term – Local effects - General population	Inhalation	7 mg/m ³
Long term – Local effects - Workers	Inhalation	35 mg/m ³

methanesulphonic acid

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects - General population	Dermal	8.33 mg/kg bw/day
Long term – Systemic effects - Workers	Dermal	19.44 mg/kg bw/day
Long term – Local effects - General population	Inhalation	420 µg/m ³

Long term – Local effects - Workers	Inhalation	700 µg/m ³
Long term – Systemic effects - General population	Inhalation	1.44 mg/m ³
Long term – Systemic effects - Workers	Inhalation	6.76 mg/m ³
Long term – Systemic effects - General population	Oral	8.33 mg/kg bw/day

PNEC

ethanediol;ethylene glycol

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		10 mg/L
Freshwater sediment		37 mg/kg
Intermittent release (freshwater)		10 mg/L
Intermittent release (marine water)		10 mg/L
Marine water		1 mg/L
Marine water sediment		3.7 mg/kg
Sewage treatment plant		199.5 mg/L
Soil		1.53 mg/kg

methanesulphonic acid

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		12 µg/L
Freshwater sediment		44.4 µg/kg
Intermittent release (freshwater)		120 µg/L
Marine water		1.2 µg/L
Marine water sediment		4.44 µg/kg
Sewage treatment plant		100 mg/L
Soil		1.83 µg/kg

8.2. Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

General recommendations:

Smoking, drinking and consumption of food is not allowed in the work area.

Exposure scenarios:

There are no exposure scenarios implemented for this product.

Exposure limits:

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

Appropriate technical measures:

The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air

flow in the work room is not sufficient is recommended. Ensure eyewash and emergency showers are clearly marked. Ensure that eyewash stations and safety showers are located within easy reach. Apply standard precautions during use of the product. Avoid inhalation of vapours.

Hygiene measures:

Take off contaminated clothing and wash it before reuse.

Measures to avoid environmental exposure:

Keep damming materials near the workplace. If possible, collect spillage during work.

Individual protection measures, such as personal protective equipment


Generally:

Use only CE marked protective equipment.


Respiratory Equipment:

Type	Class	Colour	Standards	
Respiratory protection is not needed in the event of adequate ventilation.				


Skin protection:

Recommended	Type/Category	Standards	
Dedicated work clothing should be worn.	-	-	

Hand protection:

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards	
Nitrile	0,5	> 480	EN374-2, EN16523-13, EN388	

Eye protection:

Type	Standards	
Face shield alternatively safety glasses with side shields.	EN166	

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

<i>Physical state:</i>	Liquid
<i>Colour:</i>	Blue
<i>Odour / Odour threshold:</i>	Characteristic
<i>pH:</i>	No data available.
<i>Density (g/cm³):</i>	No data available.
<i>Kinematic viscosity:</i>	No data available.
<i>Particle characteristics:</i>	Does not apply to liquids.

Phase changes

<i>Melting point/Freezing point (°C):</i>	No data available.
<i>Softening point/range (°C):</i>	Does not apply to liquids.
<i>Boiling point (°C):</i>	No data available.
<i>Vapour pressure:</i>	No data available.
<i>Relative vapour density:</i>	No data available.
<i>Decomposition temperature (°C):</i>	No data available.

Data on fire and explosion hazards

<i>Flash point (°C):</i>	No data available.
<i>Flammability (°C):</i>	No data available.
<i>Auto-ignition temperature (°C):</i>	No data available.
<i>Lower and upper explosion limit (% v/v):</i>	No data available.

Solubility

<i>Solubility in water:</i>	Completely soluble
<i>n-octanol/water coefficient (LogKow):</i>	No data available.
<i>Solubility in fat (g/L):</i>	No data available.

9.2. Other information

<i>Other physical and chemical parameters:</i>	No data available.
<i>Oxidizing properties:</i>	No data available.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

The product is stable under the conditions, noted in section 7 "Handling and storage".

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

Do not expose to any forms of heat (e.g. solar radiation). May lead to excess pressure.

10.5. Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Harmful if swallowed.

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/irritation

Causes serious eye damage.

Respiratory sensitisation

Based on available data, the classification criteria are not met.

Skin sensitisation

Based on available data, the classification criteria are not met.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity

Based on available data, the classification criteria are not met.

Reproductive toxicity

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

Based on available data, the classification criteria are not met.

11.2. Information on other hazards

Long term effects

The product contains substances that cause serious eye damage. Contact with these substances can cause irreversible effects on the eye / serious eye damage.

Neurotoxic effects: This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache,

dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

Endocrine disrupting properties

This mixture/product does not contain any substances known to have hormone-disrupting properties in relation to health.

Other information

None known.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Based on available data, the classification criteria are not met.

12.2. Persistence and degradability

Based on available data, the classification criteria are not met.

12.3. Bioaccumulative potential

Based on available data, the classification criteria are not met.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

12.6. Endocrine disrupting properties

This mixture/product does not contain any substances considered to have endocrine-disrupting properties in relation to the environment.

12.7. Other adverse effects

None known.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Product is covered by the regulations on hazardous waste.

HP 5 - Specific Target Organ Toxicity (STOT)/Aspiration Toxicity

HP 6 - Acute toxicity

Dispose of contents/container to an approved waste disposal plant.

Commission Regulation (EU) No 1357/2014 of 18 December 2014 on waste.

EWC code: Not applicable.

Specific labelling

Not applicable.

Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: TRANSPORT INFORMATION

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other informat ion:
ADR	-	-	-	-	-	-
IMDG	-	-	-	-	-	-
IATA	-	-	-	-	-	-

* Packing group

** Environmental hazards

Additional information

Not dangerous goods according to ADR, IATA and IMDG.

14.6. Special precautions for user

Not applicable.

14.7. Maritime transport in bulk according to IMO instruments

No data available.

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Restrictions for application:

Restricted to professional users.
People under the age of 18 shall not be exposed to this product.
Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

Demands for specific education:

No specific requirements.

SEVESO - Categories / dangerous substances:

Not applicable.

Additional information:

Not applicable.

Sources:

The Danish Working Environment Authority's executive order no. 1049 of 30 May 2021 on young people's work. Based on Council Directive 94/33 / EC of 22 June 1994 on the protection of young people at work.

Pregnant workers and workers who are breastfeeding (AT Guide A.1.8-6, amended 2024).
Commission Regulation (EU) No 1357/2014 of 18 December 2014 on waste.
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (CLP).
Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

15.2. Chemical safety assessment

No

SECTION 16: OTHER INFORMATION

Full text of H-phrases as mentioned in section 3

H290, May be corrosive to metals.
H302, Harmful if swallowed.
H312, Harmful in contact with skin.
H314, Causes severe skin burns and eye damage.
H318, Causes serious eye damage.
H319, Causes serious eye irritation.
H335, May cause respiratory irritation.
H373, May cause damage to organs through prolonged or repeated exposure.

The full text of identified uses as mentioned in section 1

SU 0 = Other
PROC 0 = Other
PC 14 = Metal surface treatment products, including galvanic and electroplating products
ERC 7 = Industrial use of substances in closed systems

Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service
CE = Conformité Européenne (European conformity)
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
CSA = Chemical Safety Assessment
CSR = Chemical Safety Report
DMEL = Derived Minimal Effect Level

DNEL = Derived No Effect Level
EINECS = European Inventory of Existing Commercial chemical Substances
ES = Exposure Scenario
EUH statement = CLP-specific Hazard statement
EuPCS = European Product Categorisation System
EWC = European Waste Catalogue
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
GWP = Global warming potential
IARC = International Agency for Research on Cancer (IARC)
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
OECD = Organisation for Economic Co-operation and Development
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SCL = A specific concentration limit
SVHC = Substances of Very High Concern
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
TWA = Time weighted average
UN = United Nations
UVBC = Unknown or variable composition, complex reaction products or of biological materials
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

Additional information

The classification of the mixture in regard of health hazards is in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP).

The safety data sheet is validated by

Aktiv Guld A/S

Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product.

Information in this safety data sheet cannot be used as a product specification.

Country-language: DK-en